The Birth of the DNP

The “oldest child’s" perspective of the inaugural entry DNP degree

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Motivation

• All COA approved educational programs require a doctoral degree by 1/1/2025

• “The transition of many healthcare roles to the practice doctorate for nurses and other nonphysicians in the US has been driven by national healthcare policy as attempts are made to reduce medical errors, mediate healthcare costs, and improve quality and outcomes for patients.”- AANA
Being the First

- Expectations will be different from Reality
- Go with the flow
- Everyone is learning
- Keep Communicating
Learning Objectives

• Walk through from beginning to end my experience with the DNP capstone project
• Use the successes, struggles, and failures of my own project as learning tools for others
• Give insight into possible perspectives or interpretations that one may encounter during the process
• Provide an opportunity to see this process in hindsight
Timeline

1. Began Anesthesia program **May 2016**
2. First DNP course- background and literature review- **Summer 2017**
3. IRB submission, building a team- **Fall 2017**
4. Data analytics and implementation- **Spring 2018**
5. Implementation and manuscript- **Summer 2018**
6. Journal Ready Paper and dissemination- **Fall 2018**
Timeline-Integrated Program

**Summer 2**
- Background Lit
- Cardiac
- Trauma

**Fall 2**
- IRB
- OB
- Hopkins

**Spring 2**
- Data
- Trauma
- Ped’s
- Ped’s Elect

**Summer 3**
- Implement
- Ped’s CV

**Fall 3**
- Manuscript
- Home
- PNB
## Capstone Topic Selection

<table>
<thead>
<tr>
<th>Selecting Topic</th>
<th>Advantages</th>
<th>Disadvantages</th>
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<tbody>
<tr>
<td></td>
<td>• Your Idea</td>
<td>• Site has buy in already</td>
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<td></td>
<td>• You have a bond with the topic</td>
<td>• You know it’s a problem locally</td>
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<td></td>
<td>• You can commit to it for 3 years</td>
<td>• Support/team already in place</td>
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<td></td>
<td>• Outside perspective helpful for sites</td>
<td>• Some background work complete</td>
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<tr>
<td>Assigned Topic</td>
<td>• Is it an actual problem for the site</td>
<td>• You don’t have interest in the topic</td>
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<td></td>
<td>• How feasible is it</td>
<td>• Team might not be as supportive or available for students</td>
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<tr>
<td></td>
<td>• Getting site buy in</td>
<td>• It needs to be your project</td>
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<tr>
<td></td>
<td>• Building your own team</td>
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Capstone Topic

- Anesthesia relationship
- Think Wider
- Don’t bite off more than you can chew
- Clinical Doctorate vs Research Doctorate
Building a Team-Roles

1. Faculty DNP Advisor
2. Faculty Anesthesia Advisor
3. Clinical Advisor
   a. (site specific)
Faculty Advisor(s) lesson’s learned

1. Faculty DNP Advisor
   a. Manuscript writing
   b. Timelines
   c. IRB submission, publication goals

2. Faculty Anesthesia Advisor
   a. Balance anesthesia and DNP requirements
   b. Facilitate communication with project site
Clinical Advisor- lessons learned

• Clinical Advisor
  • Champion of student’s project
  • Gets the rest of the staff on board
  • Large role in success or failure of project

• Key Elements: Time consuming!
  • Be cognizant of the commitment
Project Framework

1. Background Work
2. Implementation
3. Dissemination

Background work deliverables:
1) Topic choice is a problem nationally as well as locally
2) There is a solution to the problem
3) Solution can be tested/implemented in timely manner
My Project

Non-compliance and an incomplete surgical time out contributes to poor communication and disjointed teamwork in the operating room and can lead to adverse patient outcomes.
Background Work

Problem
- Meet with your school Librarian

Problem
- Reach out to your sites HR or data warehouse

Solution
- Literature Review

Solution
- IRB
  - Timeline
  - Human subjects
  - Children
My project: Significance of the Problem

• 2000 – To Err is Human Report
  • 44,000-98,000 patients die each year due to avoidable errors

• 2007 – World Health Organization Study
  • 7million surgical complications and 1million additional deaths

• Today – Pennsylvania Hospital
  • 1\textsuperscript{st} quarter of 2018: 204 perioperative safety events
  • 44\% of staff thinks that the surgical team adequately discusses patient safety concerns
Background Work

**Problem**
- Meet with your school Librarian
- Reach out to your site’s patient safety officer or data warehouse

**Solution**
- Literature Review
- IRB
  - Timeline
  - Human subjects
  - Children
My Solution: Synthesis of the Evidence

1. World Health Organization’s Surgical Safety Checklist (WHO SSC) is the best practice for surgical time outs
2. WHO SSC improves awareness of safety features and team communication
3. There is a need for valid and reliable methods of implementation and maintenance of compliance to the WHO SSC reap its benefits
Background Work

Problem
- Meet with your school Librarian

Problem
- Reach out to your site's patient safety officer or data warehouse

Solution
- Literature Review

Solution
- Planning your Project
  - IRB
    - Subjects, Timeline
    - Method of measurement
International Review Board (IRB)

• Protocol Title
  • Purpose
  • Targeted population
  • Procedures/interactions/interventions

• Application Type
  • Mine was exempt
  • Human research training necessary
  • Identifiable research subjects

• Study Instruments
  • Checklist
  • Survey tool
  • Modifications
  • Administration process- how collected/stored/guarantee anonymity

• Charter and Scope
  • Background, design, timeline, Consent process, supporting documentation
Project Framework

1. Background Work
2. Implementation
3. Dissemination

Implementation Deliverables:
1) Data analytics-planning
2) Actual implementation at the site
Data Analytics

1. Classes
   a. Around IRB submission timeframe
   b. Learn statistics software-SPSS
   c. Types of Tests

2. Designated analyst
   a. Difference in understanding software and competently using it
My Project-Data

Aim: To measure communication and perception of teamwork after implementation of the adapted WHO SSC using the Safety Attitudes Questionnaire Operating Room (SAQ-OR)

Needed 19 pre and post surveys for Significance

- Paired T-Test
- Demographics: ANOVA
My Implementation

1. Pre-Implementation Survey-Presentations
2. 10 weeks implementation
3. Follow up Emails
4. Surgical Specialty Selection
Implementation-Lesson’s Learned

1. Staff Participation
   a. Clinical Advisor Important Role
   b. Constant follow up

2. Resistance
   a. Everyone hates changes
   b. Why should they care

3. Rotations
   a. Clinical advisor’s role
   b. Designated DNP time
Project Framework

1. Background Work
2. Implementation
3. Dissemination

Dissemination Deliverables:
1) What do your results say-Data Analysis
2) Manuscript Writing/ Publication
3) Presentations
Purpose of Dissemination: Results

• 11 Patient Safety Events identified during Sign in and Sign out
  • Sign in
    • Incorrect patient label in a patient’s chart
    • Old incorrect consent left in patient’s chart
  • Sign out
    • 9 instances of issues with specimens (unidentified, mislabeled)
Pre-test and Post-test Mean Communication Scores Disaggregated by Positions

<table>
<thead>
<tr>
<th></th>
<th>Pre-test</th>
<th>Post-test</th>
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<tbody>
<tr>
<td>Surgeons (4)</td>
<td>60%</td>
<td>90%</td>
</tr>
<tr>
<td>Anesthesiologists (4)</td>
<td>70%</td>
<td>80%</td>
</tr>
<tr>
<td>CRNAs (11)</td>
<td>50%</td>
<td>70%</td>
</tr>
<tr>
<td>Nurses (11)</td>
<td>50%</td>
<td>60%</td>
</tr>
</tbody>
</table>
Manuscript/Publication

• Writing Process
  • Background-charter and scope
  • Literature Review
  • Methods-data analytics
  • Results/Conclusions

• Selecting Journals
  • Librarian
  • Cost, mission and vision of journal

• Journal Ready Manuscript
Introduction

- A limited “time out for safety” in the operating room (OR) contributes to poor communication and disjointed teamwork leading to adverse patient outcomes
- World Health Organization’s Surgical Safety Checklist (WHO SSC) is the best practice for surgical time outs
- The WHO SSC can save hospitals $1.2 million annually

Methods

- Prior to data collection, a sample size of 19 was determined by G*Power 3.1 software for a two-tailed paired t-test
- Pre-intervention Safety Attitudes Questionnaire-Operating Room (SAQ-OR) culture survey distributed via Qualtrics to OR staff rotating through the otolaryngology (ENT) service: n=48
- 10 weeks of observed implementation in two ENT surgical ORs: 96 total observations
- Post-intervention SAQ-OR culture survey distributed via Qualtrics: n=30
- Data analyzed via R version 3.1.3 (2018-07-02) -- “Feather Spray” software

Limitations

- Single site
- Possible Hawthorne Effect
- Survey is self-reporting
- Limited staff participation

Conclusions

- Use of the checklist improved teamwork and communication while identifying potential safety events
- Results led hospital leadership to commit to department wide program implementation
- Recommended future research
  - Studies monitoring compliance associated with the use of the WHO SSC
  - Bi-annual SAQ-OR culture surveys to continue to monitor teamwork and communication

Results

Table 1 Pre- and Post-SAQ-OR mean domain scores

<table>
<thead>
<tr>
<th>Domain</th>
<th>Pre SAQ Mean (SD)</th>
<th>Post SAQ Mean (SD)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication Climate*</td>
<td>59.5 (19.5)</td>
<td>71.5 (13.9)</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Contextual Readiness</td>
<td>65.2 (10.3)</td>
<td>65.7 (14.2)</td>
<td>0.88</td>
</tr>
<tr>
<td>Patient Safety*</td>
<td>64.5 (13.5)</td>
<td>71.2 (14.2)</td>
<td>0.54</td>
</tr>
<tr>
<td>Teamwork</td>
<td>56.7 (13.8)</td>
<td>67.8 (8.8)</td>
<td>&lt;0.01</td>
</tr>
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</table>

SD=Standard Deviation; *non-normal data

- 11 Patient Safety Event Identified while using the WHO SSC
  - 2 Incorrect consents remediated
  - 9 Incorrect specimens relabeled

Acknowledgements

- Dr. Kirsten Hickerson DNP, RN, CEN; Dr. Angela Didonato DNP, MSN, CRNA; and Colleen Wiochowski MSN, CRNA; Family and Friends
Entry Level DNP Difficulties

• Anesthesia vs DNP Priorities
  • Student’s Focus
  • 2 programs simultaneously occurring
  • Anesthesia Faculty are not DNP Faculty

• No Designated DNP time
  • Rotations

• Student Led
  • Impact Factor limited
How to be a good oldest child

• Be open to change
• Listen
• Learning experience
• Communication
Justin Gerwitz  Faculty Mentor: Kirsten Hickerson, DNP
Opioid Prescriptions in Adolescents

Thomas D. Carney and Hannah G. Zentner  Faculty Mentor: Rosemary Polomano, PhD
Ketorolac Use-Influence on Postoperative Bleeding and an ERAS Colorectal Surgical Population: A Pre-Post Analysis of Practice

Carlota Izaguirre  Faculty Mentor: Rosemary Polomano, PhD
Community Health Project: Satisfaction and Perceived Barriers to Healthcare Access

Alexie Smith  Faculty Mentor: Rosemary Polomano, PhD
Simplified Airway Assessment and the Electronic Health Record

Zachary R. Adams, Cesar G. Blanco, and Adele M. Roda  Faculty Mentor: Kim Westra, DNP
Postpartum Hemorrhage Management Educational Quality Improvement Initiative

Nicole R. DiFabio, Sarah P. Gaffney, and Jenna L. Lashley  Faculty Mentor: Kirsten Hickerson, DNP
Hypocalcemia in Newborns: The Need for Blood Transfusions: A Pilot Study in a Level I Trauma Center

Amber Stahl  Faculty Mentor: Kirsten Hickerson, DNP
World Health Organization Universal Safety Checklist Project

Jennifer Van Pelt  Faculty Mentor: Kevin Driscoll, DNP
A Healthcare Provider's Toolkit for Ebola Virus Disease and High Risk MedicalDiabetes
Thank you to Kirsten Hickerson, Angela Didonato, Colleen Wlostowski, my husband Max, and the rest of my family and friends.

Questions?